PLANNING AND IMPLEMENTING PROCEDURES FOR ACTION RESEARCH IN THE GEARY COUNTY UNIFIED SCHOOLS COMPARING READING OF FIRST GRADE CHILDREN TAUGHT BY ITA AND TRADITIONAL ORTHOGRAPHY

by

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CHAPTER I

INTRODUCTION

Since the first schools were established in our country, there has been much disagreement among educators concerning the correct methods for teaching reading. One of the issues at the present time raises the question of the desirability of an earlier start in reading. Some educators are advocating the return to a more phonetic approach to reading as a method of teaching beginning reading. The study of linguistics has led to emphasis on "decoding" or breaking the code. Chall states:

> Most school children in the United States are taught to read by the meaning-emphasis method. Yet the research from 1912 to 1965 indicates that a code-emphasis method--i.e.--one that views beginning reading as essentially different from mature reading and emphasizes learning of the printed code for the spoken language, produces better results, at least up to the point where sufficient evidence seems to be available--to the end of the third grade.[1]

Most children enter school with an eagerness to learn to read, but during the process many difficulties arise. There are many inconsistencies in our 26-letter alphabet.[2] The inconsistency of this alphabet in presenting sounds of our language contributes to difficulty in initial reading. Similar difficulties arise in learning to spell

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[1] Jeanne Chall, Learning to Read: The Great Debate (New York: McGraw Hill, 1967), p. 307.

[2] John Downing, "How ITA Began," Elementary English, XLIV (January, 1967), pp. 40-46.

and write.[3]

In the early years of reading instruction, it is impossible to separate the teaching of reading, writing, and spelling. Increasingly it is recognized that development of skill in any one of these areas serves to reinforce and extend the skills in the other areas.[4] The i/t/a medium of reading proposes to speed up beginning reading and writing for first graders and to remove inconsistencies of the traditional alphabet.[5]

I. PURPOSE OF THE STUDY

The purpose of this study was to find out whether or not there was a difference in (1) Word Reading, (2) Paragraph Meaning, (3) Vocabulary, (4) Spelling, (5) Word Study Skills, (6) Creative Writing, and (7) Oral Reading between children taught using i/t/a and by traditional orthography at the end of the first year of school and again at the end of the second year.

II. LIMITATIONS

Due to the mobility of the population in the Geary County School System, only children who were considered permanent residents were

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[3]Albert J. Mazurkiewicz (ed.), New Perspectives in Reading Instruction (New York: Pitman Publishing Corporation, 1964), p. 540.

[4]Theodore Clymer, "What Do We Know About the Teaching of Reading?" Educational Leadership (December, 1967), pp. 389-391.

[5]ITA Bulletin, Vol. II, No. 2, Initial Teaching Alphabet Publications, Inc. (New York: Winter, 1964), p. 2.

included in this study. No children who had repeated the first grade were accepted in the i/t/a groups due to the harmful effects that might arise from transferring to a different alphabet.[6] Only children who had a full year's training in kindergarten were included. Only children for whom data was complete on all tests were used in the statistical analysis.

III. DEFINITION OF TERMS

ITA[7]

The i/t/a is a medium, not a method, of teaching reading. It is a temporary procedure for learning to read and write more quickly.[8] The alphabet is designed solely for the purpose of lightening the load for beginning readers. Almost one-half of the symbols in this alphabet are the same as those used in t.o., and the added ones are similar to the t.o. letters.[9] The alphabet consists of forty-four letters or symbols with only one sound for each symbol. These symbols are called by the sound and not by the alphabet letter-name. The children write what they hear, but spelling is not mentioned until after the transition to t.o. which is made when a child reads well, usually between the middle and the end of the first year of school.[10]

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[6] Mazurkiewicz, op. cit., p. 539.

[7] ITA is the form used in titles; i/t/a is the form commonly used in textual material in the United States.

[8] Downing, op. cit. [9] Ibid. [10] Ibid.

T.O.

The t.o., or traditional orthography, is the regular print which utilizes the twenty-six letters of the traditional alphabet.

Low Socio-Economic Neighborhood

A low socio-economic neighborhood may be described as one which has youngsters of various ethnic backgrounds who come from less privileged homes where books are lacking and language opportunities are limited. Many of the parents living in this neighborhood have little interest in school and have annual incomes of less than $3500.

Middle-Level Neighborhood

A middle-level neighborhood is one in which the parents are concerned with the education of their children. Many of these parents are business and professional people who have provided their children with many enrichment experiences and with an adequate language development background.

Experimental Group

The children in the first grades who were taught using the Early-to-Read i/t/a Program, by Dr. Harold Tanyzer and Dr. Albert Mazurkiewicz were called the experimental group.

Control Group

The children in the first grade who were taught by the Houghton Mifflin Basal Reading Series were called the control group.

CHAPTER II

REVIEW OF THE LITERATURE

The research for this project was conducted by a group of Junction City teachers who became interested in i/t/a and formulated a study committee to determine the feasibility of initiating an i/t/a program in the local school system. The committee spent the school year of 1964-65 evaluating existing i/t/a programs. They read, discussed, and analyzed articles pertaining to i/t/a in professional journals and in current magazines.

I. IIA EXPERIMENTS

British Experiment

The University of London, under the direction of John Downing, conducted a five-year experiment in the i/t/a medium of teaching reading. After two years, the results of this experiment indicated that children taught to read by this medium not only learned to read more quickly, but became more independent readers and writers than children taught by a basic reading series.[11]

Downing stated that after the fourth year of this research, the results showed that i/t/a was not a panacea but a promising innovation which had opened up a new avenue in research which should prove very

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[11] John Downing, "We're Enthusiastic," NEA Journal (September, 1965), pp. 20-24.

rewarding for all concerned with the improvement of reading.[12] More recent findings of this same research project concluded that the traditional orthography of English is a serious cause of difficulty in the early stages of learning to read and write. i/t/a generally produces better results in reading and spelling by the end of the third and fourth years of school. In word recognition tests the i/t/a students were superior to non i/t/a students by about five months at the end of the third year of school, and in t.o. spelling, the i/t/a students were significantly superior by mid-fourth year.[13]

Bethlehem Project

Mazurkiewicz conducted the first large-scale i/t/a pilot program in the United States at Bethlehem, Pennsylvania under the sponsorship of Lehigh University. He reported that eight months after starting on i/t/a, most first graders were reading at second and third grade levels.[14]

II. CLAIMED ADVANTAGES OF ITA

From various studies that have been made it can be concluded at the present time:

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[12]Downing, "How ITA Began," op. cit.

[13]John Downing, "British ITA Research," The Reading Teacher, XXI (April, 1968), pp. 640-646.

[14]Albert J. Mazurkiewicz, "Bethlehem Test Results," ITA Bulletin, Vol. II, No. 3, Initial Teaching Alphabet Publications, Inc. (New York: Summer, 1965), pp. 1-3.

1. Children taught with i/t/a learn to read and write much more rapidly than those taught with the regular alphabet.
2. The i/t/a alphabet cuts down the inconsistencies of the regular alphabet, and provides a one-to-one relationship between sound and the alphabetical symbol.
3. Children quickly become more independent in reading and writing, can express themselves in sentences and stories earlier, more abundantly, and about more subjects than children taught using t.o.
4. Reading failures are reduced.
5. Advanced children are advanced rapidly to high reading levels at their own speed.
6. Improvement of speech defects is a natural by-product.

III. UNANSWERED QUESTIONS

Cutts pointed out that we should suspend judgment until more research has been completed and the data examined from a variety of viewpoints. He listed the following factors that make early appraisals of i/t/a of doubtful validity:

1. Don't know the long-range effect on reading and spelling performances, and may not see clearly what effect (if any) it will have until pupils who have taken part in the experiments reach the fourth or fifth grade.
2. Don't know the extent to which enthusiasm of teachers and the glamor of the experiment lifts pupils to higher

reading achievement. Need to find out how well i/t/a expedites learning after the glamor has worn off.

3. Need more refined experiments to determine the types of learners for whom it works best.

4. Suspend judgment and it will be easier to maintain a scientific atmosphere in which objective data can be weighed and sifted. It is important that reading researchers continue their efforts to simplify the learning task for beginning readers.[15]

After visiting the i/t/a program in England, Sheldon raised the following questions:

1. Would the children make an easy transition to the traditional orthography as claimed by the proponents of the program, or would some find the transition difficult?

2. Does learning i/t/a have a negative effect at a later time when children begin to increase their reading and writing activities?

3. Does it make sense psychologically to teach a procedure which will be abandoned in a short time after a limited use?[16]

Enstrom suggested that we look behind the scenes of educational

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[15]Warren G. Cutts, "It's Too Soon to Know Definitely," NEA Journal (September, 1964), pp. 21, 22.

[16]William Sheldon, "Average and Superior Children Will Make the Transition," Grade Teacher (October, 1964), pp. 34, 118, and 130.

movements to seek weaknesses as well as strengths prior to wholesale adoption. He stated that with i/t/a, it seems clear that somebody owes us answers which have not, as yet, been forthcoming:

1. Will i/t/a really eliminate the current number of reading failures?
2. Will boasted gains made with the i/t/a approach be permanent or merely temporary?
3. How difficult will conventional spelling be when i/t/a has been abandoned?
4. How much actual, true, published research exists in support of i/t/a?
5. Are there less confusing ways of achieving similar goals?
6. Will the side-effects outweigh the original cure?
7. Is it reasonable to conclude that there can not be a hazard-free utopia to solve all reading problems for all learners?[17]

As a result of the study, the i/t/a committee agreed that there was much room for bias in the materials that were available for evaluation, but they felt that there were enough evidences of success that it would be worthwhile for the school system to initiate an action research in the first grade to study the effects of i/t/a.

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[17]E. A. Enstrom, "Wanted: Unbiased Answers," Elementary English, (January, 1967), pp. 47-52.

CHAPTER III

PROCEDURE

I. PRE-PLANNING

The i/t/a study committee was reactivated at the beginning of the 1965-66 school term. Dr. J. Harvey Littrell, Professor of Education at Kansas State University, was asked to serve as a consultant for the procedural aspects of the action research.

Background Information for the Action Research

A questionnaire was prepared and sent to 43 schools using i/t/a to obtain information such as: (1) success of programs, (2) need for improvement, (3) pupil selection, (4) teacher preparation, (5) parent education, and (6) problems of transition. The 38 replies that were received, in addition to personal comments of the respondents, produced much information to guide the study committee.[18] Some of the ideas gained from the questionnaire that aided the committee in making the final decision to initiate a pilot research study in the first grade are:

1. All comments were favorable, none had any reservations about the effectiveness of i/t/a for beginning reading.
2. There were no restrictions on the selection of pupils.

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[18] The questionnaire, with the total recorded responses, may be found in the Appendix.

3. No special training was required for teachers. In most instances, one or two meetings were held to orient the i/t/a teachers.
4. Many reported that the program involved tremendous amounts of work for teachers; regardless of this additional work, teachers preferred to remain in i/t/a rather than return to t.o.
5. No problems were encountered with parents when they were briefed on the program.
6. Transition from i/t/a to t.o. is a normal process and creates no problem.
7. When ample time was allowed to prepare a child for transfer from a school using i/t/a to one using t.o., no adverse effects were evident.

During the year, the chairman of the study group participated in an i/t/a workshop at Des Moines, Iowa. The elementary counselor visited i/t/a classrooms at University City, Missouri and attended a conference there conducted by Mr. Downing, implementer of the British experiment. The teachers who were selected for the i/t/a classrooms visited the same ongoing program in the spring of 1966. Seven other members of the committee attended a lecture at Emporia, Kansas given by Albert J. Mazurkiewicz, director of the i/t/a program at Bethlehem, Pennsylvania, and co-author of the American i/t/a series.

Plans for the Action Research

Following the tabulation of the questionnaires, the committee

formulated the following plans for the study:

1. Action Research would be conducted over a four-year period of time in the Geary County Unified School System.
2. Only pupils who were considered permanent residents would be used in the research.
3. Four classes of first grade children would be used. Two classes would be taught using the Houghton-Mifflin Readers which were being used in the school system as the basal text. The other two classes would be taught by the use of i/t/a materials.
4. For each type of material used, there would be one class located in a neighborhood of low socio-economic status and one class from a middle-level neighborhood.
5. The teaching methods would be the same for both groups; they would spend the normal amount of time on the reading-writing program as is required by the basal series of readers.
6. A special committee would be responsible for informing the parents about the project; this committee would also be responsible for the publicity given to the study.
7. The children in the i/t/a classes would make the transfer to t.o. when the teachers felt that they were ready for the transfer; this should take place after the middle and before the end of the first grade. After the transfer, the children would complete the year's work in basal and

supplemental readers.

8. If some of the children were not capable of making the transfer before the end of the year, they would be retained in the i/t/a classrooms for another year. The other children would be promoted to the second grade.

9. Subjects in all groups would remain together throughout the first two-year time span. From the beginning of the third grade until the end of the study, the pupils in both the i/t/a and the control group would be processed into regular classrooms.

10. The evaluation would be of a built-in nature; the children would be tested at intervals over the four-year period. They would be evaluated at the middle and the end of the first year, and at the end of the second and fourth years.

11. The tests would attempt to measure:
    a) reading ability--speed and fluency, and comprehension
    b) creative writing--sentence structure, originality, complexity, and meaningful expression of ideas
    c) spelling--textbook and in every phase of work
    d) attitude--in reading, toward writing creatively, toward school in general, and toward individual success.

12. A special committee composed of the chairman of the study group, the elementary counselor, and a remedial reading teacher who is qualified to administer and interpret individual tests, would select and administer the tests,

they would also be responsible for recording the data.

13. A statistical design for the study would be formulated under the direction of Dr. Littrell.

II. IMPLEMENTATION

The Selection of the Sample

The committee, with the approval of the Superintendent of Schools, selected the two schools for the study. An attempt was made to include children from different environments so that the sample would be representative of the total school population. The teachers for the research study were selected in the same manner. Whenever possible, teachers in the experimental buildings were used. Consent of the teachers was obtained prior to the final assignments. Those selected were comparable in terms of education, experience, and enthusiasm.

The testing committee selected a readiness test as the criterion for grouping. All kindergarten children in both schools, who were considered to be permanent residents, were given the Detroit Kindergarten Individual Readiness Test in May, 1966. Pupils from both schools were then divided as equally as possible into two groups, on the basis of test scores; they were then selected randomly for the i/t/a and the control groups. Since a number of these children moved during the summer, additional children were tested the week preceding the opening of school in the fall of 1966 and were added to the groups.

Ninety-three pupils, 45 boys and 48 girls were assigned to the four classrooms selected to participate in the study. Twenty-one

pupils were assigned to each of the control rooms. Twenty-four pupils were assigned to one i/t/a classroom and 27 were assigned to the other i/t/a classroom. A larger number of children were assigned to the i/t/a groups because it was felt that pupils moving into the schools during the year would need to be placed in the t.o. classrooms; by the end of the year, the classrooms would be approximately the same size.

Informing Parents

A publicity committee paved the way for the experiment by briefing parents in both schools. A film "The ITA Story" was used to explain the program. The parents were informed that other research studies showed that the children taught under i/t/a could be expected to achieve as well as or better than children taught under the basal readers. The parents were also informed that pupils would be randomly assigned to the experimental and control groups and that such assignment would be strictly followed. Consent of the parents was obtained prior to making the final assignments the week before school opened in the fall of 1966. Parents were given the final opportunity to voice their disapproval on enrollment day; there were no objections to any of the assignments.

Evaluation

The testing committee selected the following instruments of evaluation and schedule for the evaluation periods:

1. The Detroit Kindergarten Test--criterion for grouping--to be given in May, 1966.
2. Pre-Reading Inventory--to be given upon completion of

readiness program--permission granted by Houghton-Mifflin Company to transliterate test for i/t/a group.

3. Otis Quick-Scoring Mental Abilities Test--to be given the second semester of the first year of the study.
4. Stanford Achievement Test
   a) Form W to be given in i/t/a to that group and in t.o. to the control group in January, 1966.
   b) Form X to be given in t.o. to all pupils in both groups at the end of the first year of school.
   c) Primary Battery II, Form X to be given at the end of the second year of the study.
   d) Intermediate I Battery to be given at the end of the fourth year of the study.
5. Gray Oral Reading Test--to be given at the end of the first, second, and fourth years.
6. Subjective Evaluation--to be made by committee and all teachers involved in the study at the end of each year of the study.
7. Instrument to Measure Creative Writing--to be given at the end of the first, second, and fourth years of the study.

The testing committee, with the assistance of Dr. Richard Owens, Assistant Professor, Kansas State University, devised an evaluative instrument which was used to test the pupils involved in the study:

A slide equivalent for the Mother-Goose Print[19] depicting children's behavior was used. The print is based on the story, "Who Put the Cat in the Well?" This was projected on a screen and the subjects were told that this was a test of how curious and observing they were about the things that they saw in the picture. They were then asked to write their own stories and to spell their words with no help from the teacher administering the test. A limit of thirty minutes was allowed for the test.

A ranking scale of from 0-5 was used to obtain a measure in these abilities of creative writing:

1. Fluency--sequential order.
2. Flexibility--counted number of different ideas and converted to scale.
3. Originality--cause and effect.
4. Elaboration--counted number of descriptive words and converted to scale.

This evaluation was of a subjective nature, but every precaution possible was used to eliminate bias in the scoring process. A more appropriate measure was to be devised at a later date to be given at the end of the fourth year of the study.

Statistical Design

A t test was used to determine whether statistically significant

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[19] Mother-Goose Print 6, Penn Prints, New York.

difference existed between the control and experimental groups when various factors were taken into consideration. The control group consisted of students taught using t.o., and the experimental group was made up of students taught by using i/t/a. The null hypotheses tested are given in the following section.

CHAPTER IV

PRESENTATION OF DATA

I. EQUATING OF GROUPS

The scores on the Detroit Kindergarten test were used as the criterion grouping students into the control and experimental groups. Forty-one and 51 students respectively, were in the control and experimental groups. However, complete information for all factors evaluated was obtained for 26 students in the control group and 44 students in the experimental group. The three measures used to equate the two groups for the statistical study were: (1) age as of January, 1967, (2) mental ability as determined by the Otis-Quick Scoring Mental Ability Test, and (3) raw scores on the Detroit Kindergarten Test.

Table I shows that the populations were well matched.

TABLE I

STATISTICAL DESCRIPTION OF THE MATCHED SAMPLES FROM THE CONTROL AND EXPERIMENTAL GROUPS

Factor Tested	Control Group		Experimental Group		t score	Interpretation
	Mean	S.D.	Mean	S.D.		
Age in months	78.7	3.5	78.1	3.8	0.7	n.s.
I.Q.	108.1	13.2	112.7	11.9	1.5	n.s.
Detroit Kdgn. Test	22.3	4.3	23.0	4.1	0.7	n.s.

n.s. indicates that there is no significant difference between the groups ($p > 5\%$).

There was no statistically significant difference between the groups in the three factors measured. For each of these traits the variabilities within groups were approximately the same for the two groups; this is shown by the standard deviations.

The Otis Quick-Scoring Mental Ability Test Alpha Form was used as a measure to equate the groups for the statistical study. It was given the second semester of the first year of the study. The mean for the control group was 108.1 and the S.D. was 13.2. The mean for the experimental group was 112.7, the S.D. was 11.9, and the t was 1.5. Table I shows that there was no statistically significant difference between the two groups.

II. TESTING PROGRAM

The Pre-Reading Readiness Inventory Test for the Houghton Mifflin basic readers was administered to the control group in October after the completion of the readiness program and to the i/t/a group the first day of December. Permission was granted by the Houghton Mifflin Company to transliterate the test for the i/t/a groups. The total possible score for the test was 80 points. The average number of points scored by the control and the i/t/a groups were 76.5 and 73.5 respectively. Due to the completely different approaches of the two readiness programs and to the length of time required to complete them, it was decided that these test results would not be used for statistical purposes in this study.

The Primary I Battery of the 1964 Stanford Achievement Test

Form W was administered in January, 1967 in t.o. for the control group and in i/t/a for the experimental group. The complete battery was not given. The tests given were Word Reading, Paragraph Meaning, Vocabulary, Spelling, and Word Study Skills.

Null Hypotheses. The null hypotheses tested for the study were:

1. There is no statistically significant difference between the January test scores of the control group and experimental group on the various sections of the Stanford Achievement Test.
2. There is no statistically significant difference between the May test scores of the control group and the experimental group on the various sections of the Stanford Achievement Test and on the Gray Oral Reading Test and the Creative Writing Test.
3. There is no statistically significant difference between the January and May test scores on the various sections of the Stanford Achievement Test for the control group and for the experimental group.

Information concerning the data acquired from the January testing program has been given in Table II.

There was no statistically significant difference between the control and the experimental groups on the vocabulary test. The experimental group performed better on all other tests. The difference in favor of the experimental group was statistically significant at the 1% level in Word Reading, Paragraph Meaning, Spelling, and Word Study Skills.

TABLE II

MEAN AND S.D. SCORES FOR THE STANFORD ACHIEVEMENT TEST, FORM W, GIVEN IN JANUARY, 1967 TO THE CONTROL AND EXPERIMENTAL GROUPS (EACH GROUP TESTED IN ITS MEDIUM)

Test	Control Group		Experimental Group		t score	Interpretation
	Mean	S.D.	Mean	S.D.		
Word Reading	12.4	3.5	28.6	2.7	20.0	**
Paragraph Meaning	7.1	4.5	21.3	9.0	8.9	**
Vocabulary	19.3	5.0	20.3	5.0	0.8	n.s.
Spelling	5.3	3.5	14.3	4.5	9.3	**
Word Study Skills	27.4	7.8	41.1	8.5	7.9	**

** indicates significance at the 1% level.
n.s. indicates no significance.

The Primary I Battery of the Stanford Achievement Test Form X was given in t.o. to the control and experimental groups in May at the end of the first grade. The subtests given in January were repeated for this test. Table III indicates that the difference between the control and experimental groups were statistically significant at the 1% level in Word Reading, Paragraph Meaning, and Word Study Skills. The difference between the two groups was statistically significant in Spelling at the 5% level. No significant difference existed between the two groups in Vocabulary.

The Gray Oral Reading test was administered individually to 36 pupils in the control group and to 50 pupils in the experimental group in May, 1967. A statistical study of the raw scores on the Gray Oral Reading Test shows that the difference in favor of the experimental

TABLE III

MEAN AND S.D. SCORES FOR THE STANFORD ACHIEVEMENT TEST, FORM X, GIVEN IN MAY, 1967 IN T.O. TO THE CONTROL AND EXPERIMENTAL GROUPS

Test	Control Group		Experimental Group		t score	Interpretation
	Mean	S.D.	Mean	S.D.		
Word Reading	21.4	7.2	28.6	5.7	4.4	**
Paragraph Meaning	20.8	7.5	29.0	7.4	4.4	**
Vocabulary	21.3	5.3	22.8	5.8	1.1	n.s.
Spelling	12.4	5.1	14.9	3.8	2.2	*
Word Study Skills	33.0	8.3	41.5	8.1	4.0	**

* indicates significance at the 5% level.
** indicates significance at the 1% level.
n.s. indicates no significance.

group was significant at the 1% level. The mean score for the control group was 5.7 and the S.D., 4.9. For the experimental group the mean score was 11.6 and the S.D., 6.2. The t score was 4.5.

Table IV gives the reading levels of the pupils obtained from the Gray Oral Reading Test.

Sixty per cent of the i/t/a pupils were reading at third grade level or above; while twenty-two per cent of the control pupils were reading at that level.

The test in Creative Writing was given to all pupils in t.o. to both the control and experimental groups in May at the end of the first year of school. The possible score for each subtest was 5 points; the total possible score was 20 points. Table V shows the comparisons of scores for each of the subtests for the control and the experimental groups.

TABLE IV

INSTRUCTIONAL READING LEVELS[a] AS MEASURED IN T.O. BY THE GRAY ORAL READING TEST GIVEN TO THE CONTROL AND EXPERIMENTAL GROUPS AT THE END OF THE FIRST GRADE

Reading Level Yr. -- Mo.	Experimental Pupils	Control Pupils
5 -- 1-3	1	
5 -- 0		
4 -- 7-9	3	
4 -- 4-6	2	
4 -- 1-3	1	
4 -- 0	5	
3 -- 7-9	3	2
3 -- 4-6	9	4
3 -- 1-3	7	2
3 -- 0		
2 -- 7-9	2	1
2 -- 4-6	5	4
2 -- 1-3	4	6
2 -- 0		
1 -- 7-9	4	7
1 -- 4-6		3
1 -- 1-3		
0[b]	4	7
Mean Reading Level	3.0	2.0

[a]Refers to the standard achievement as pupils progress from month to month and from grade to grade in a 10-month school year.

[b]Does not correspond to absolute zero. It simply indicates that the raw score on the test was too low to convert to a corresponding reading level score.

TABLE V

A COMPARISON OF SCORES FOR THE CONTROL AND EXPERIMENTAL GROUPS OBTAINED FROM SUBTESTS OF THE CREATIVE WRITING TEST GIVEN IN MAY, 1967 TO 34 CONTROL PUPILS AND 46 EXPERIMENTAL PUPILS

Subtests	No.[a] Group	Range of Scores					
		0	1	2	3	4	5
Fluency							
	Control	2	18	11	3		
	Exper.	1	7	7	14	15	2
Flexibility							
	Control	2	18	11	2	1	
	Exper.	1	5	11	16	11	2
Originality							
	Control	5	14	11	4		
	Exper.		4	11	9	17	2
Elaboration							
	Control	4	19	10	1		
	Exper.	2	5	15	15	7	2

[a]This refers to the number of pupils in each group making a particular score.

A difference between total scores on the Creative Writing Test in favor of the experimental group was significant at the 1% level. The mean for the control group was 5.2 and for the experimental group, 11.3; the standard deviations for these groups were 2.4 and 4.3 respectively. The t score was 7.5.

A study was made comparing the differences made between January and May on the various parts of the Stanford Achievement Test for the control group and the experimental group. The results of this study are shown in Table VI.

The control group had statistically significant differences

TABLE VI

A COMPARISON OF DIFFERENCES BETWEEN JANUARY AND MAY SCORES ON THE STANFORD ACHIEVEMENT TESTS MADE BY THE CONTROL AND THE EXPERIMENTAL GROUPS

	January		May		t	Interpre-
	Mean	S.D.	Mean	S.D.	score	tation
			Control Group			
Word Reading	12.4	3.5	21.4	7.2	5.8	**
Paragraph Meaning	7.1	4.5	20.8	7.5	8.1	**
Vocabulary	19.3	5.0	21.3	5.3	1.4	n.s.
Spelling	5.3	3.5	12.4	5.1	5.9	**
Word Study Skills	27.4	7.8	33.0	8.3	2.5	*
			Experimental Group			
Word Reading	28.6	2.7	28.6	5.7	0.0	n.s.
Paragraph Meaning	21.3	9.0	29.0	7.4	4.4	**
Vocabulary	20.3	5.0	22.8	5.8	2.2	*
Spelling	14.3	4.5	14.9	3.8	.67	n.s.
Word Study Skills	41.1	8.5	41.5	8.1	.23	n.s.

* indicates significance at the 5% level.
** indicates significance at the 1% level.
n.s. indicates no significance.

between the January and May scores on all of the Stanford Achievement scores except in vocabulary. The experimental group had statistically significant differences between January and May scores in Paragraph Meaning and Vocabulary, but not in the other three factors. This would seem to indicate that the experimental group made greatest gains at the beginning of the year, and the control group at the end of the year.

There were 29 pupils in the control group and 40 pupils in the i/t/a group at the beginning of the second year of the i/t/a study.

One pupil in the control population and four pupils in the i/t/a population were retained in the first grade for another year. All of the i/t/a pupils who were retained had made the transition and were reading and writing in t.o. Two of the pupils had rather severe speech problems. The other losses in the populations were attributed to children moving from the district.

All of the pupils in the research study were kept in the same groups for both the first and second years of the study in order to simplify testing procedures. The second-year teachers were regular second grade teachers. The same tests were given both years.

Table VII gives the mean and standard deviation scores for the Stanford Achievement Test Form X, given in May, 1968.

TABLE VII

MEAN AND S.D. SCORES FOR THE STANFORD ACHIEVEMENT TEST, FORM X, GIVEN IN MAY, 1968 TO THE CONTROL AND EXPERIMENTAL GROUPS

Test	Control Group		Experimental Group		t score	Interpre-tation
	Mean	S.D.	Mean	S.D.		
Word Reading	19.7	4.5	23.4	3.7	3.1	**
Paragraph Meaning	31.7	9.9	35.8	9.7	1.5	n.s.
Spelling	14.4	5.2	18.8	5.6	3.0	**
Word Study Skills	36.8	13.5	44.8	11.8	2.2	*

* indicates significance at the 5% level.
** indicates significance at the 1% level.
n.s. indicates no significance.

The results show that the differences in favor of the experimental group were statistically significant at the 1% level in Word

Reading and Spelling; and at the 5% level in Word Study Skills than the control group. No difference existed between the groups in Paragraph Meaning.

Table VIII gives the reading levels of the control and i/t/a pupils obtained from the Gray Oral Reading Test given in May, 1968.

TABLE VIII

INSTRUCTIONAL READING LEVELS AS MEASURED IN T.O. BY THE GRAY ORAL READING TEST GIVEN TO 29 CONTROL AND 40 EXPERIMENTAL PUPILS AT THE END OF THE SECOND GRADE

Reading Level Yr.	Mo.	Control Pupils	Experimental Pupils
6	1-3		1
6	0		
5	7-9		2
5	4-6		1
5	1-3	1	2
5	0		
4	7-9	1	8
4	4-6	3	8
4	1-3	3	3
4	0	3	2
3	7-9	3	4
3	4-6	2	4
3	1-3	5	3
3	0		
2	7-9	2	2
2	4-6	2	
2	1-3	1	
2	0		
1	7-9	2	
1	4-6	1	
Mean Reading Level		3.3	4.3

Scores for the control group ranged from 1.4 to 5.2; while the scores for the experimental group ranged from 2.8 to 6.1. The mean level shows a 10 month difference in favor of the i/t/a group. Table IV, page 24, shows that a ten month difference also existed at the end of the first year of the project.

A statistical study of the raw scores on the Gray Oral Reading Test shows that a difference in favor of the experimental group was significant at the 1% level. The mean score for the control group was 13.7 and the S.D., 4.5. For the experimental group the mean score was 18.8 and the S.D., 3.9. The t score was 3.9.

Table IX shows the comparisons of scores for each of the subtests for the Creative Writing test given to the control and experimental groups in May, 1968.

A difference between total scores on the Creative Writing Test in favor of the experimental group was significant at the 1% level. The mean for the control group was 7.8 and for the experimental group, 10.0; the standard deviations for these groups were 2.7 and 3.4. The t score was 2.7.

TABLE IX

A COMPARISON OF SCORES FOR THE CONTROL AND EXPERIMENTAL GROUPS OBTAINED FROM SUBTESTS OF THE CREATIVE WRITING TEST GIVEN TO 34 CONTROL PUPILS AND 46 EXPERIMENTAL PUPILS IN MAY, 1968

Subtests	No.[a] Group	Range of Scores					
		0	1	2	3	4	5
Fluency							
	Control	5	5	8	11		
	Exper.		8	14	10	5	3
Flexibility							
	Control		11	10	6	1	1
	Exper.		3	14	13	6	4
Originality							
	Control	4	9	5	9	2	
	Exper.		11	13	9	5	2
Elaboration							
	Control	2	17	8	2		
	Exper.		8	24	7		1

[a]This refers to the number of pupils in each group making a particular score.

CHAPTER V

SUMMARY AND CONCLUSIONS

I. SUMMARY

Four classes of second grade children have completed their second year in an Action Research Study in the Geary County School System. Two of the classes were taught beginning reading by the i/t/a medium and two were taught by (t.o.) the traditional alphabet.

Two years of study and planning prior to the initiation of the research study may be credited for a part of the smooth operation encountered in implementing and in evaluating the study. The first year was spent in activities which would help to determine the feasibility of initiating an i/t/a program in the first grade. In all of the literature that was read and evaluated, none of the existing i/t/a programs reported any negative findings. But all recommended i/t/a as a quicker and more simple way to teach beginning reading.

The second year was spent making plans for the implementation of the study. Dr. Littrell, professor of education at Kansas State University, was contacted to serve as a consultant for the study. A questionnaire was sent to 43 schools using i/t/a. The respondents supplied valuable information for the committee. They reported that no special training was needed for teachers; parents must be properly informed; and that no problems were involved in transition from i/t/a to t.o.

Many of the committee members visited ongoing i/t/a programs,

workshops, and conferences. The committee, with the approval of the Superintendent of Schools, selected the teachers and the schools to be used in the study. A special committee was responsible for informing parents in both schools of the plans for the study. Another committee was responsible for selecting, administering, and evaluating the tests used in the study. The statistical analysis for the study was formulated by Dr. Littrell.

As tested by the null hypothesis, there was a statistically significant difference in favor of the experimental group between the January test scores of the control and experimental groups on all sections of the Stanford Achievement Tests with the exception of Vocabulary where no difference existed between the groups. The results of the May, 1967 tests showed that a statistically significant difference in favor of the experimental group existed in the Gray Oral Reading Test scores, on Creative Writing, and on all sections of the Stanford Achievement Test with the exception of Vocabulary where no difference existed between the groups. The control group made statistically significant gains between the January and May results on all sections of the Stanford Achievement scores with the exception of Vocabulary. The experimental group made statistically significant gains between January and May in Paragraph Meaning and in Vocabulary, but not in the other factors. This would seem to indicate that the experimental group made greatest gains at the beginning of the year, and the control group at the end of the year. The results of the May, 1968 test scores showed that there was a statistically significant difference in favor of the experimental

group on the Gray Oral Reading Test scores, on Creative Writing, and on all sections of the Stanford Achievement Test with the exception of Paragraph Meaning, where no difference existed between the groups.

II. CONCLUSIONS

Within the limitations of this study, conclusions at the end of the second year of the research are based on the data presented; they also reflect the subjective evaluation of the investigator and the teachers involved in the study.

1. No major problems were encountered throughout the study; therefore, the successful operation of the study may be attributed to careful planning in researching and implementing the program.
2. The parents involved in the study cooperated in every possible way; there was no negative reaction.
3. The information gathered through research and the questionnaire results were valid for the local research study.
4. Children appear to learn to read sooner when taught in i/t/a, and the advantage appears to continue until the end of the second year of school.
5. Pupils taught in i/t/a can be expected to spell as well as traditionally taught pupils.
6. Teachers reported that i/t/a children were easier to handle due to earlier independent work habits and more self-confidence than t.o. pupils. Children chose to go to

the library table to read stories or to write stories in their spare time.

7. Creative Writing, not previously expected of first graders, appears to be more advanced for the i/t/a pupils.

8. No problems were encountered by pupils making the transition. However, the teachers felt that the transfer to t.o. should have been postponed for poorer readers in the experimental group until they were more fluent readers.

ACKNOWLEDGMENT

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APPENDIX

QUESTIONNAIRE CONCERNING THE OPERATION OF i/t/a

I. Relationships with the Public

A. Education of the Public

1. Were films used?..... 1. Yes 21 No 13 No Ans. ____

2. Was this education of the public done through PTA?..... 2. Yes 15 No 16 No Ans. 3

3. Were other methods used for education of parents of participating pupils..... 3. Yes 26 No 5 No Ans. 3

4. If your answer was "yes", please state the methods used. 4.

Demonstrations	4
Parent Conferences	12
New articles, visual aids	6
Workshops for parents	3
Letters and meetings	3

B. Parental Consent

5. Was written consent obtained from the parents involved?.... 5. Yes 10 No 24

6. If your answer was "Yes", explain how this consent was obtained..... 6.

Letters to parents	11
Permission by phone	1

II. The Children Involved

A. Selection

Check the socio-economic levels of students included: 7.

a. All levels	a. 28
b. Lower levels	b. 4
c. Upper levels	c. 1
d. Middle levels	d. 3

8. Check the levels of mental ability included: (Multiple Response) 8.

   a. All levels — a. 25
   b. Bright and gifted — b. 3
   c. Average — c. 3
   d. Slow learners — d. 4
   e. Educable - retarded — e. 2

9. Were readiness tests administered?..... 9. Yes 26 No 7

10. Was there special testing when remedial children were involved?.....10. Yes 8 No 18 No Ans. 8

11. If your answer was "Yes", please explain.

    (ITPA, Binet Psy., Individual IQ, PPVT, IRI, Pre and Post (Lee, Clark), Beginning and at end -- California Achievement)

B. Mobility

12. Was care used in selecting children who were permanent residents?..... 12. Yes 11 No 20 No Ans. 3

13. Was anything done to accommodate the child who had to transfer within the school year to a school without i/t/a?..... 13. Yes 16 No 14 No Ans. 4

14. If your answer was "Yes", please explain.

    Test to establish t.o. level. (Instruction given in t.o. before transfer. Transfer students put in t.o. class.)

15. Was there any evidence of an adverse effect on the child who had to make such a move?. 15. Yes 2 No 22 No Ans. 10

16. If your answer was "Yes", please explain.

    (One reply of (some).
    One feared might be because of only one week's time to prepare for transfer.)

III. Use of Classrooms

A. Quantity

17. How many classrooms were involved in the initial experiment?

(No. of classrooms)	1-2-3-4-5-7-8-15-26
(Instances)	15-5-2-3-1-2-2- 2- 1

18. How many children were enrolled in each classroom?

(No. of students in classroom)	3-8-10-11-12-13-15-23-24-26-28-30-31
(Instances)	1-1- 1- 1- 1- 1- 1- 1- 3- 6- 3- 7- 3

B. Location

19. Were two or more experimental classrooms conducted in the same building?..... 19. Yes 13 No 19 No Ans. 2

20. Were the experimental classes conducted in more than one building in the same system?..... 20. Yes 16 No 16 No Ans. 2

C. Grade Level

Check blank opposite grade levels in which experiments were conducted:

21. Kindergarten: Only readiness..... 21. 9
22. Kindergarten: Actual reading..... 22. 3
23. First..... 23. 28
24. Second..... 24. 9
25. Third..... 25. 4

REMEDIAL:

26. Third..... 26. 7
27. Fourth..... 27. 9
28. Fifth..... 28. 1
29. Sixth..... 29. -
30. Junior High..... 30. 4

31. Senior High..... 31. 1
32. Adults..... 32. 3

D. Grouping Within the Classroom

33. Were children taught in ability groups within the classroom?..... 33. Yes 29 No 5

34. Did i/t/a increase individualized instruction?... 34. Yes 23 No 10 No Ans. 1

E. Carry-Over in Other Subject Areas

35. Was i/t/a used for number sentences?..... 35. Yes 23 No 10 No Ans. 1

36. Was i/t/a used for other subjects?..... 36. Yes 23 No 8 No Ans. 3

IV. Preparation and Involvement of Teachers

A. Assignment

37. Were teachers assigned on a voluntary basis?..... 37. Yes 28 No 5 No Ans. 1

38. Were experienced teachers used?..... 38. Yes 28 No 5 No Ans. 1

39. Was age a factor in teacher assignments?..... 39. Yes ____ No 32 No Ans. 2

40. If your answer was "Yes", please explain. 40.

(None answered "yes", but one replied, "volunteers, with no first year teachers.")

B. Training

41. Were preparatory courses made available?..... 41. Yes 25 No 7 No Ans. 2

42. If answer was "Yes", explain any special training for teaching of i/t/a.

a. 2 or 2½ day workshops 11
b. 3 or 4 day workshops 5

c. Attendance at Lehigh 4
d. Workshops other colleges 3
e. Local workshops by consultants or supervisors 6

43. Could classrooms using i/t/a be visited by prospective teachers?..... 43. Yes 32 No 2

44. Was it necessary to train second grade teachers to cope with children who had not made the transition to t.o. in first grade?..... 44. Yes 11 No 16 No Ans. 7

45. Were substitute teachers trained?..... 45. Yes 9 No 21 No Ans. 4

46. If your answer was "Yes", explain how.

a. Workshops 12
b. Coordinator substituted 1

V. Transition

47. At what time during the first grade did the majority of children make the transition from i/t/a to t.o.?

a. End of year 4
b. Late spring 10
c. March 5
d. January to May 3
e. November and December 1
f. Book 4 1

No answer 9
Retarded group 1

48. What was the approximate range in reading levels in t.o. after the transition was made?

a. 2 - 4.3 13
b. 1.5 - 4.7 7
c. 1.9 - 5.8 3

Not applicable in 11 instances:

2 retarded
4 remedial
1 junior high

3 first year experience
1 teacher teaching elsewhere

49. Did one teacher ever teach the same group in both first and second grades?.. 49. Yes 8 No 16 No Ans. 10

PLANNING AND IMPLEMENTING PROCEDURES FOR ACTION RESEARCH IN THE GEARY COUNTY UNIFIED SCHOOLS COMPARING READING OF FIRST GRADE CHILDREN TAUGHT BY ITA AND TRADITIONAL ORTHOGRAPHY

by

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B.S., K.S.T.C., Emporia, 1959

AN ABSTRACT OF A MASTER'S REPORT

submitted in partial fulfillment of the

requirements for the degree

MASTER OF SCIENCE

College of Education

KANSAS STATE UNIVERSITY
Manhattan, Kansas

1968

A group of interested teachers formulated a study committee to determine the feasibility of initiating an i/t/a program in the first grade of the Geary County School System. Two years of research and planning preceded the initiation of the program.

The school year of 1964-65 was spent reviewing current i/t/a programs. As a result of the favorable reports, the committee decided to initiate an i/t/a Action Research Study in the school system.

The following year was spent in planning. Dr. Littrell, Professor of Education at Kansas State University, was asked to serve as a consultant for the study. A questionnaire was prepared and sent to 43 schools using i/t/a. The information received produced valuable suggestions for selection of pupils, educating the teachers and parents involved, and making the transition. Ongoing i/t/a programs were visited by some of the committee members. Others attended i/t/a conferences and workshops.

Plans were made to initiate an i/t/a program in the fall of 1966 with four classes of first graders. Two of the classes would be taught by i/t/a and two would be taught by (t.o.) the regular alphabet. The schools and teachers were selected for the study. A publicity committee briefed parents in both schools of the plans and used a film to explain the i/t/a medium. A testing committee selected, administered, and evaluated the tests that were used for the study. In addition, a measure for evaluating creative writing was devised with professional help.

Evaluation periods were set for the middle and end of the first

year, and at the ends of the second and fourth years.

On the basis of the test scores of the Detroit-Kindergarten Test, the pupils were divided as equally as possible into two groups. Forty-one and 51 students respectively were assigned to the control and experimental groups. The three measures used to equate the two groups were the Detroit Kindergarten Test, age, and mental ability as determined by the scores obtained from the Otis-Quick-Scoring I.Q. Test. There were no statistically significant differences between the groups in any of these measures.

The Reading and Spelling sections of the Stanford Achievement Test were given in January in i/t/a for the experimental group and in t.o. for the control group. At the end of the first and second years of the study the tests given were the Stanford Achievement, Gray Oral Reading, and Creative Writing. A t test was used to determine whether statistically significant differences existed between the control and experimental groups when various factors were taken into consideration. The differences between the groups were determined in (1) Word Reading, (2) Paragraph Meaning, (3) Vocabulary, (4) Spelling, (5) Word Study Skills, (6) Creative Writing, and (7) Oral Reading.

Results showed that differences in favor of the experimental group were statistically significant throughout the two-year period in all factors measured with the exception of Vocabulary and Paragraph Meaning at the end of the first and second years respectively. There were no differences between the groups in these areas.

The real value of the Action Research lies in the gains made by

all who were involved in the study. It is believed that the pupils gained from improved instruction due to teacher involvement and enthusiasm. The involvement of the committee members in conducting the research, the planning and implementation of the study, and the approval and cooperation of the parents involved, all made the Research worthwhile.